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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/575,021

04/07/2006

Russell Vaughan Meddes

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EXAMINER

BERGIN, JAMES S

ART UNIT

PAPER NUMBER

3641

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/575,021	Applicant(s) MEDDES ET AL.	
	Examiner JAMES S. BERGIN	Art Unit 3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/21/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 10 is objected to because of the following informalities: In line 1, "*claim 1 claim*" should be corrected. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 13, the limitation, "*the particles*" lacks a proper antecedent basis.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 4, 5, 19-21, 27 and 28, are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Collins et al. (US 6,371,219 B1).

Collins et al. clearly disclose a shaped charge perforator 24 for mounting in a perforating gun 12, the gun 12 used in a method of forming perforations in a well-bore (col. 2, lines 30 – 41; Figs. 1, 2). Collins et al. disclose that the case 26 and/ or the liner

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28 of the shaped charge are made from a molding which comprises a metal loaded polymer matrix (col. 2, line 42 – col. 3, line 60).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 3, 6-18, 23-26, and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collins et al. (US 6,371,219 B1).

Regarding claims 2, 3, 10, 11, 17, 18, 22, 23, 24, 25, 26, 29, 30, 31, Collins et al. do not explicitly disclose **1)** first and second portions of the component comprising different ratios of filler to matrix; **2)** the degree of homogeneity of the distribution of the filler throughout the matrix; or the degree of non-uniformity in the distribution of the filler in the matrix of the liner; **3)** that the filler volume is in the range of 45% to 85% or 45% to 65% of the combined volume of filler and matrix; **4)** the density of the filler and the ratio of the filler density to matrix density being substantially zero; **5)** a method for making the component under vacuum; **6)** the liner being of non-uniform thickness; **7)** the filler being substantially density-matched to the plastic material of the matrix.

The examiner takes official notice that the claimed elements and features **1) - 7)** above comprise only elements and features of a shaped charge case and liner that were well known in the art at the time of invention and were well within the skill level of one of ordinary skill in the art at the time that the invention was made, the selection of

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such elements and features being made to optimize or match the performance of the gun to a particular subterranean formation.

Regarding claims 6-9, Collins et al. do not explicitly disclose that the shaped charge case is reinforced. The examiner takes official notice that reinforcement of a shaped charge case comprising a preform was well known in the art at the time of invention and well within the skill level of one of ordinary skill in the art at the time that the invention was made, the reinforcing preform protecting the shaped charge during handling.

Regarding claims 12-16, Collins et al. do not explicitly disclose the size of the filler particles or whether they comprise fibre, flake or a non-metallic material. The examiner takes official notice that appropriately sizing the filler particles and comprising them of fibre, flake or a non-metallic material comprises nothing more than that which was well known to one of ordinary skill in the art at the time that the invention was made, the selection of the filler particle size and the nature of the filler material being selected to optimize or match the performance of the gun to a particular subterranean formation.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. PTO FORM 892 attached.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES S. BERGIN whose telephone number is (571)272-6872. The examiner can normally be reached on Monday - Wednesday and Friday, 8.30 - 5.30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571-272-6873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James S. Bergin/
Primary Examiner, Art Unit 3641